WHAT EXPLAINS THE SPREAD OF CORPORATE SOCIAL RESPONSIBILITY?

THE ROLE OF COMPETITIVE PRESSURE AND INSTITUTIONAL ISOMORPHISM IN THE DIFFUSION OF VOLUNTARY ADOPTION

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Seungmin Han

Dissertation Committee:

John E. Butler
Liming Guan
Ronald Heck
Kiyohiko Ito, Chairperson
James Richardson

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DEDICATION

In memory of my grandfather and grandmother

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ABSTRACT

This study builds upon prior literature on the diffusion of corporate social responsibility (CSR) by incorporating the potential role of its adoption by industry competitors and provides a new perspective on the determinants of the spread of voluntary CSR adoption within a country. The CSR perspective encompasses broader aspects of corporate purpose and roles, viewing the firm as embedded in the ecosystem of its social and natural environment. This study argues that firms make CSR adoption decisions in response to competitive pressure as well as institutional mimetic pressures. Based on an event history analysis of 12-year longitudinal data from a sample of 711 Korean publicly traded firms, the findings suggest that the CSR behavior of industry competitors (the number of rival companies that have already adopted CSR), even that of non-leader rivals within the same industry, is positively associated with a focal firm's earlier adoption of CSR, leading to the diffusion of CSR across firms. In addition, the empirical results indicate that a firm's CSR adoption decision is accelerated by institutional pressures arising from institutional isomorphism (the number of non-rival companies that have adopted CSR) and foreign stock market listing (the number of companies listed on foreign stock exchange). Finally, whether and how these explanatory variables are related to the timing of adoption (early, middle, and late) is analyzed. This study implies that both competitive and institutional mimetic pressures play significant roles in corporate decision making on voluntary CSR adoption.

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CHAPTER 1. INTRODUCTION

1.1 Corporate Social Responsibility (CSR)

Traditionally, corporations have been viewed as primarily playing an economic role in society (Friedman, 1970), but in recent decades, the high expectations and numerous requirements of internal and external stakeholder groups have led to corporations taking on social and environmental functions as well. Corporate social responsibility (CSR) is the management approach or business practice that reflects these non-financial expectations and requirements, which encompass ethical, social, and environmental considerations (Carroll, 1979). Although the concept of CSR is an accepted norm today, much debate has occurred regarding the perspectives of corporate purposes and roles (Stout, 2012) since it was first promoted in academic literature as early as the 1950s (Bowen, 1953). The acceptance of CSR has become prevalent, placing pressure on corporations to be more socially responsible (Stout, 2012).

Fiorina (2001), Hewlett-Packard's former CEO, acknowledged this newly recognized social responsibility of contemporary corporations in her speech:

> We must remake our businesses to be far more active corporate citizens–creators not only of shareowner value, but also of social value, in ways that are systemic, and sustainable. It becomes our job to use a profit engine to raise the capabilities, extend the hopes, and extinguish despair across the globe.

In response to social demands, many corporations around the world have currently adopted CSR, which is a relatively new management paradigm. The need to achieve business

goals as well as maintain social legitimacy for their continued existence in a society is forcing companies to increase their focus on stakeholders' interests and how to engage with stakeholders (DiMaggio & Powell, 1983; Freeman, 1984). The resulting social pressure facilitates isomorphism among companies, a process by which those in similar social environments come to resemble each other (DiMaggio & Powell, 1983). Isomorphism may lead to the diffusion of CSR practice within countries. However, considerable differences exist in the timing of CSR adoption and the level of CSR implementation among companies, even within the same country (Reverte, 2009). For example, a leading company or large-sized companies are the most likely to be the first to adopt CSR within an industry (KPMG, 2013). Latecomer companies can be expected to learn from these leaders by benchmarking them.

Perceptions of CSR have evolved since its introduction, and the overall understanding of it has improved. However, its multifaceted nature, which encompasses different ranges or aspects of responsibility, has caused the notion of CSR to continue to be defined and conceptualized from various perspectives, rather than one unified point of view (Aguinis & Glavas, 2012; Gjølberg, 2009; Höllerer, 2013; Lu & Abeysekera, 2017; Marrewijk, 2003). Reviewing the definition of CSR in prior studies, Kitzmueller and Shimshack (2012) found two basic conceptual characteristics: CSR is revealed as (1) "observable and measurable behavior or output (CSP: Corporate Social or Environmental Performance)" that (2) goes beyond mandatory requirements enacted by law. These authors define CSR as "corporate social or environmental behavior that goes beyond the legal or regulatory requirements of the relevant market(s) and/or economy(s)." This definition of CSR aligns with the definition that is the most frequently used by the Commission of the European Communities (2001); that is, "a concept whereby companies

integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis" (Dahlsrud, 2006; Gond, Kang, & Moon, 2011). In accord with previous studies, the current study also uses the European Commission's definition of CSR.

Difficulties and complexities in defining the concept of CSR have led to the development and application of multiple ideas and research about how to measure it (Campbell, 2006; Gjølberg, 2009). Consequently, various ways have been used to observe and measure whether, when, and how a company has adopted CSR or is implementing and performing it (Gjølberg, 2009; Orlitzky, Schmidt, & Rynes, 2003). One way that firms attempt to engage, adopt, or implement CSR and communicate their actions to their stakeholders is through voluntary disclosure of their CSR performance or information. Accordingly, the measurement of CSR adoption in this study is operationalized using firms' own CSR reporting. This reporting is the specific action taken by a firm to communicate the outcomes of its CSR commitment or engagement to its stakeholders. In this study, firms that have previously reported their CSR performance are regarded as having adopted or implemented CSR.

This research defines the diffusion of CSR adoption as the expansion of the phenomenon of voluntary CSR reporting from the first reporting firm to other firms in a market. Accordingly, my focus is on differences in the timing of CSR adoption based on the year of each firm's initial CSR report publication. CSR or sustainability reports have been used as a main conduit for companies to officially communicate their own CSR activities, performances, and outcomes to their stakeholders, even when there is no standardized rule or mandatory requirement for doing so (Reverte, 2009). This framework should be carefully applied to different institutional contexts,

however, because several countries have legislation that establishes reporting requirements based on the size of a firm or on a specific industry. Regulatory mandates may accelerate CSR practice adoption within those countries (Haberberg, Gander, Rieple, Martin-Castilla, & Helm, 2007), which include Denmark, France, India, Indonesia, Japan, Nigeria, South Africa, and the United States (KPMG, 2013). This research therefore views companies as having adopted and implemented CSR when they voluntarily disclose their CSR information, even when they are under no obligation to do so.

1.2 Competition and CSR

Competition is an important factor in corporate decision making (Porter, 1980). Companies pursue their own business goals, which are usually similar to those of numerous firms in the same market at the same time. Accordingly, a firm strives to improve its viability and sustainability by improving its own competitiveness. The concept of competitiveness has traditionally been related to productivity and performance. Recently, however, the concept has also incorporated the dimension of CSR. Vilanova, Lozano, and Arenas (2009) have suggested that CSR and competitiveness are correlated, with image and reputation being the main links in their proposed framework. A positive correlation between CSR and competitiveness has also been suggested by Bansal and Roth (2000). In addition, Li (2010) has found that companies' voluntary disclosure decisions are influenced by the status of market competition. I therefore expect that companies' CSR adoption decisions are also influenced by competitive factors in their external environment. A peer competitor's first movement toward CSR reporting, for example, could induce other firms in the same industry to follow suit (e.g., Knickerbocker, 1973).

1.3 Diffusion and CSR

Empirical research pertaining to the diffusion of CSR practice include studies of the diffusion of CSR management policy adoption among managers and entrepreneurs in China (Yin & Zhang, 2012), the characteristics of CSR-related departments in Japan's information and communications industry (Koh, 2014), the global adoption of the CSR framework (Lim, 2012), the adoption of CSR reporting standards (Nikolaeva & Bicho, 2011), and the perceptions of CSR among individuals and the practices across/within companies (Quinio, 2009). However, none of these studies have adequately and simultaneously analyzed the economic, competitive, international, and social factors related to the diffusion of CSR. We still lack sufficient knowledge about how and why firms adopt CSR and how this behavior may spread across firms under the same or similar institutional pressures (Caprar & Neville, 2012; Fransen, 2012). Specifically, competitive pressures and institutional factors, in addition to firm characteristics, have not yet been fully explored as potential determinants of CSR adoption and diffusion. This research attempts to fill this gap in the existing literature by developing a set of hypotheses for testing.

To analyze the potential determinants of CSR diffusion, this study first categorizes them in terms of three different types of factors: competitive pressures, institutional (mimetic) pressures, and corporate-level (internal) characteristics. The competitive pressures accrue from the preceding behavior of a firm's competitors; this behavior might serve as peer pressure within the same industry. Institutional (mimetic) pressures potentially include the behavior of non-competitor companies outside the industry and exposure to the rules of multiple institutions. This research therefore investigates whether and how these competitive pressures, institutional

(mimetic) pressures, and firm characteristics are associated with the CSR adoption decision and with the difference in the timing of CSR adoption among companies within the same country context.

The remainder of the paper is structured as follows. Chapter 2 presents background information on CSR. Next, chapter 3 provides a review of previous literature, focusing on stakeholder theory, institutional frameworks, the diffusion of innovation frameworks, and competitive reaction literature. The fourth chapter develops hypotheses based on prior theoretical approaches and empirical studies. In chapter 5, after introducing my research framework and explaining its relation to multiple determinants and their potential links with CSR diffusion, I outline my research methods, describing my model, data, and variables. Then, the results of empirical analysis are presented in chapter 6. Finally, implications and expected contributions of this study are discussed in chapter 7.

CHAPTER 2. CSR BACKGROUND

2.1 CSR awareness

The popularity and support for CSR among stakeholders are higher than ever before (Ramasamy & Yeung, 2008), owing to increased CSR awareness and understanding in society as a whole (Reverte, 2009). Questions no longer exist on whether a firm has a social responsibility beyond its economic role or how the range of corporate accountability should be limited. Rather, as people have become familiar with the concept of CSR, corporations have increased their CSR involvement in response to societal expectations (Flammer, 2013; Sirsly & Lamertz, 2008).

Indeed, McKinsey (2014) reported that many business leaders and top management teams regard CSR as one of their top priority management issues (McKinsey & Company, 2014). Recent survey results of the UN Global Compact (UNGC) also show that CEO-level awareness and engagement in CSR within corporations is high, both in small and medium-sized enterprises (SMEs) (60%) and larger firms (74%) (UNGC, 2013).

In addition, public awareness of CSR among stakeholder groups has grown considerably (Chiu & Wang, 2015). For instance, consumers indicated heightened expectations of a company's broader social responsibility in a recent global survey (Nielsen, 2014). Given positive CSR-related information of a specific product, brand, or company, some consumers are willing to pay more because they value the CSR attributes (McWilliams & Siegel, 2001). Investors and shareholders have also expanded their interest in CSR, giving weight to a company's social and environmental impact as well as its profits (Flammer, 2013). Currently, a growing number of investors take CSR into consideration in their financial portfolio decision making, requiring more responsible behavior and transparency from firms (World Federation of Exchanges, 2015).

The role of the media and non-governmental organizations (NGOs), which are often cited as factors related to CSR implementation, is viewed as providing consistent monitoring and scrutiny of corporate behaviors (Bowen, 2000; Garriga & Melé, 2004).

2.2 CSR activities

In response to the growing attention to CSR, firms have undertaken various types of CSR activities: joining CSR-related initiatives, disclosing their CSR performance data, contributing to the community development, making charitable donations, and so forth (Chiu & Wang, 2015; Lev, Petrovits, & Radhakrishnan, 2010; Lim, 2012; Vinerean, Cetina, & Dumitrescu, 2013).

As of 2013, about 8,000 companies in 140 countries have endorsed the global CSR initiative of UNGC, which was launched in 2000 to promote 10 core principles pertaining to human rights, labor, environment, and anti-corruption (UNGC, 2013). Interestingly, according to the UNGC report (2013), more than 50% of these companies are SMEs with less than 250 employees. By voluntarily participating in this CSR framework, these companies not only express their commitment to CSR but also try to implement CSR in their business operations.

According to a recent survey by KPMG (2013), more than 90% of the 250 largest global companies on the Fortune Global 500 list and more than 70% of the top 100 companies ranked by revenue in 41 countries (4,100 companies in total) are currently reporting their CSR performance. As a mainstream CSR practice, firms have been pursuing more transparent and effective communication with their stakeholders through public disclosure of their information (KPMG, 2013).

Moreover, charitable donation, as a traditional way of social contribution with a long

history, continues to show consistent growth globally (Wang, Gao, Hodgkinson, Rousseau, & Flood, 2015). This activity includes corporate funding, employees' volunteer activities, or product donations (Omran & Ramdhony, 2015).

2.3 CSR reporting trend

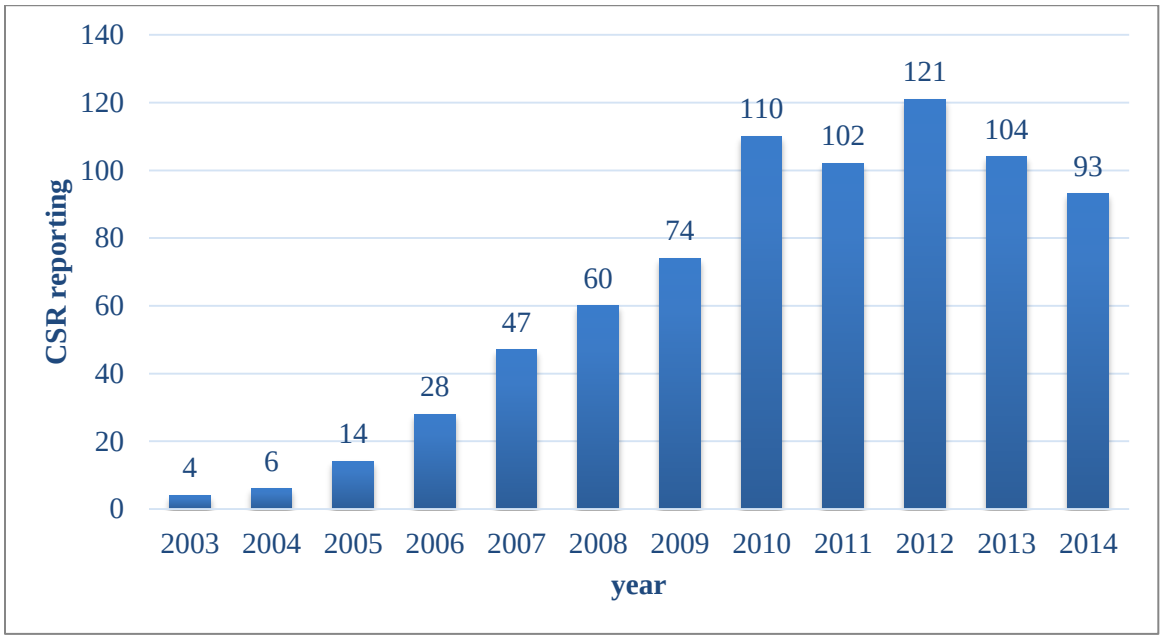
As indicated in a recent survey, the trend for disclosure of non-financial information by businesses is on the rise (KPMG, 2013), aligning with an increase in stakeholders' demands for transparent communication (World Federation of Exchanges, 2015). The trend is global, but differences exist between countries in terms of CSR practices due to distinct country contexts (Baughn, Bodie, & McIntosh, 2007). In previous studies, the practice of CSR was compared between Asian and Western companies (Baughn et al., 2007; Welford, 2005). Some studies reported that Asian firms appeared to be less advanced in terms of CSR practice and were lagging behind Western companies, including European and North American companies (Welford, 2005).

The differences are still present, but the gap between Asian and Western firms has been narrowing (KPMG, 2017). As of 2011, the average CSR reporting rates by world region were 71% in Europe, 69% in North and South America, and only 49% in Asia. As of 2017, the rate is the highest among North and South American firms (83%) and followed by Asian firms (78%) and European firms (77%) (KPMG, 2017). Even among firms in the same region, however, the reporting rates are not the same across countries. In Asia, for instance, more than 95% of the top 100 firms in countries with mandatory reporting requirement by stock exchange rules or government regulations, including Japan, India, and Malaysia, disclosed their CSR information,

whereas about 80% of the 100 largest Korean firms reported this information in both 2015 and 2017.

In Korea, a country with no direct mandatory requirement for CSR reporting, the corporate decision on whether or not to disclose a firm's CSR-related information is not based on any legal obligation. As displayed in Figure 1, the total number of organizations with sustainability reporting has shown an overall increasing trend from 2003 until 2014. The number includes the reports published by public and private companies, or listed and non-listed companies, in addition to public agencies, NGOs, and other types of organizations in Korea. This trend points to a gradual diffusion of CSR practice across organizations in Korea.

Figure 1. CSR Reporting in Korea



Source: Compiled by the author from data released by the Business Institute for Sustainable Development (BISD) of the Korea Chamber of Commerce and Industry (KCCI) (http://www.bisd.or.kr)

CHAPTER 3. LITERATURE REVIEW

Until recently, the majority of studies have paid more attention to the outcomes of CSR than to its preconditions or drivers (Höllerer, 2013). Very early in the discussion of CSR, Wallich and McGowan (1970) noted concerns and expectations regarding firms' ability to reconcile social benefits and economic interests, and subsequent research has focused on the relationship between CSR activities and financial performance in terms of stock price, market share, firm credit ratings, and financial accounting earnings (Attig, El Ghoul, Guedhami, & Suh, 2013; Orlitzky et al., 2003; Pava & Krausz, 1996; Ullmann, 1985). According to Pava and Krausz (1996), more than half of the 21 empirical studies published between 1972 and 1992 found positive associations between social performance and measure of financial performance. In a more recent review of CSR literature published from 1970 to 2011, Lu and Liu (2014) reported a shift in the main topics of investigation. Researchers have examined the relationship between CSR and corporate financial performance (CFP) since the 1970s. In the early years, the question of whether companies had an obligation to be socially responsible was still being debated. Until 1990, the results were contradictory and conclusions were indefinite (Lu & Liu, 2014). Later, from 1991 to 2006, multiple attempts were made to understand CSR from different angles by applying organizational theories or stakeholder theories (Clarkson, 1995; Lu & Liu, 2014; Turban & Greening, 1997). According to Lu and Liu (2014), the discussion since 2006 has focused on globalization-related issues in CSR.

Studies focusing on the preconditions or drivers of CSR have only recently begun to be published (Höllerer, 2013). Humphreys (2010) has argued that innovation diffusion studies would benefit from considering institutional factors when the innovation is brand new. Some

research has indeed examined institutional factors, such as institutional environment and institutional pressure or legitimacy, in the context of CSR diffusion because CSR adoption and implementation are relatively new and unexplored innovations (Aguinis & Glavas, 2012; Campbell, 2006, 2007; Marano & Kostova, 2016). Furthermore, some researchers have studied the diffusion of CSR practice through multinational enterprises (MNEs), which feature complex institutional environments across multiple countries (Marano & Kostova, 2016; Muller, 2006). Along these lines, Caprar and Neville (2012) have incorporated cultural perspectives, in addition to institutional perspectives, in their research to explain CSR adoption.

3.1 CSR literature

Numerous studies have argued that companies should be held responsible for addressing social concerns. The arguments have been made from two main perspectives, *stakeholder theory* (Freeman, 1984) and *institutional perspective* (DiMaggio & Powell, 1983). Both approaches hold that companies are a recognized part of the social system and that they respond to the external business environment for their own purposes.

Stakeholder theory (Freeman, 1984) highlights firms' obligations beyond their economic responsibility to maximize profit (Stout, 2012) and focuses on their key role in society in terms of their responses to the social requirements of various stakeholder groups. Stakeholder groups include the government, employees, suppliers, consumers, local communities, media, and NGOs (Chiu & Wang, 2015; Freeman, 1984). This theory emphasizes that companies must account for the interests of internal and external stakeholder groups, in addition to the interests of shareholders, to achieve their business goals. Companies are expected to endeavor to recognize

their own stakeholders and to satisfy an explicit or implicit requirement set by various stakeholder groups. Otherwise, some argue, the company form itself may be doomed to failure in the future (Brower & Mahajan, 2012; Freeman, 1984).

Researchers have studied and empirically examined various CSR-related topics in light of stakeholder theory (Chiu & Wang, 2015; Hah & Freeman, 2014). A review of previous studies on stakeholder theory conducted between 1984 and 2007 revealed a preference for empirical approaches (Laplume, Sonpar, & Litz, 2008). Many studies have adopted stakeholder theory as a means to explain firms' CSR engagement (e.g., Hah & Freeman, 2014). Ullmann (1985), for example, used Freeman's (1984) framework to develop a comprehensive model with stakeholder power as one of the three dimensions of CSR. He then applied this framework to enable a prediction of CSR activity and disclosure level. In later research, Roberts (1992) applied Ullmann's (1985) model and found a positive association between stakeholder power and CSR disclosure, providing empirical support for stakeholder theory being an appropriate theoretical foundation for CSR research. According to a more recent review by Chiu and Wang (2015), this theory has been particularly useful for explaining the relationship between organization and society. They also make use of stakeholder theory to explain the determinants of social reporting quality (Chiu & Wang, 2015).

The approach from the institutional perspective offers an explanation for the corporate isomorphism phenomenon, which is fostered by an uncertain external environment (DiMaggio & Powell, 1983). DiMaggio and Powell (1983) argued that organizations are more likely to imitate or model other organizations' behaviors and practices when organizational goals, strategies, or the environment seem uncertain and ambiguous. These researchers see the isomorphism process

as operating through three distinct mechanisms: *coercive, mimetic,* and *normative*. Coercive isomorphism involves the influence of both formal and informal pressures from other organizations such as regulatory agencies. Mimetic isomorphism refers to companies' efforts to imitate successful organizations. Finally, normative isomorphism refers to companies' propensity to adapt to professionalization through training and networks (Haberberg et al., 2007; Kim, 2011). Isomorphism enables companies' efficient use of resources by minimizing their initial cost of investigation (Cyert & March, 1963) and provides legitimacy through the recognition and approval from society and from other organizations (Meyer & Rowan, 1977).

The concept of isomorphism explains such organizational behaviors as market entry, organizational structure, and investment decisions (Barreto & Baden-Fuller, 2006; Lieberman & Asaba, 2006; Salomon & Wu, 2012). Because a company's decisions regarding CSR adoption, participation, and implementation can be influenced by other companies, the process is also considered to exemplify isomorphism. In other words, it is a means of adapting to the institutional environment and thereby competing with other companies.

Kim, Park, and Lee (2009) have argued that globalization is driving the isomorphism phenomenon by intensifying competition in a different competitive context. With globalization, companies are exposed to increasingly open and competitive environments. At the same time, they are learning, both directly and indirectly, from experienced foreign MNEs (Kim, Park, & Lee, 2009). The researchers also argued that heated debate regarding social responsibility induces normative and mimetic pressure on companies to increase corporate philanthropy. The influence of globalization as an isomorphic force across countries, however, remains somewhat limited, at least in terms of the adoption of organizational practice (Guler, Guillén, &

Macpherson, 2002). Guler et al. (2002) argued that the influence of globalization is constrained because organizations' decisions are affected by institutions in each country, which causes variations in the diffusion of organizational practices across countries. Because this research focuses on CSR diffusion in a domestic setting, however, institutional isomorphism can still be useful in explaining the diffusion of CSR under the same or similar institutional contexts.

As previously mentioned, considering multiple theories as complementary rather than competitive can be more reasonable when attempting to explain an empirical phenomenon (Gray, Kouhy, & Lavers, 1995). CSR studies have employed such a multi-theoretical approach in order to elucidate CSR practices (Husted & Allen, 2006; Reverte, 2009; Yang & Rivers, 2009). This dissertation similarly applies multiple frameworks with new perspectives to study the diffusion of organizational practice in the adoption of CSR.

3.2 Diffusion literature

Rogers (2003) defines diffusion as "the process in which an innovation is communicated through certain channels over time among the members of a social system" (p. 5). The four main components of diffusion are innovation, communication channels, time, and social system (Rogers, 2003). Rogers (1962) viewed the diffusion process of innovation (i.e., an idea perceived as new) from the adopter's perspective and has clarified three aspects of the process: (a) what sorts of innovations are chosen for adoption based on five features (relative advantage, compatibility, complexity, trialability, and observability), (b) how organizations choose to adopt innovations, and (c) what diffusion networks are effective.

CSR can also be understood as an innovation (Quinio, 2009) with some notable features.

In terms of relative advantage, CSR can help firms adapt to a competitive environment and it can support their business strategies (Quinio, 2009). Firms that adopt and implement it may therefore have a relative advantage compared to non-adopters. Complexity may present difficulties for the understanding and use of an innovation (Rogers, 1962). From the perspective of potential adopters, the complexity of CSR may hinder its introduction into companies. Furthermore, Vinnari and Laine (2013) point out that CSR reporting may be considered a managerial innovation because it is a voluntary and new management approach that accounts for social and environmental issues. This research therefore attempts to apply diffusion theory to analyze how firms adopt CSR and how adoption diffuses across companies.

3.3 Competitive reaction literature

A series of similar corporate actions taken by firms in a market, either simultaneously or consecutively, lead to the diffusion phenomenon among the firms. Many prior studies have recognized and understood the phenomenon as the outcome of competitive process (Haleblian, McNamara, Kolev, & Dykes, 2012; Knickerbocker, 1973). For risk minimization or rivalry reduction, firms tend to intentionally make strategic decisions based on the prior actions of industry competitors (Knickerbocker, 1973; Leary & Roberts, 2014; Lieberman & Asaba, 2006). This tendency exists because the firms are competing with one another for market shares or market positions within a specific industry. This reactive corporate decision making may also be influenced by the competitive environment in which a firm is embedded in terms of the intensity of competition, number of rivals, or uncertainty (Knickerbocker, 1973; Lieberman & Asaba, 2006; Yu & Ito, 1988).

Oligopolistic reaction literature, a representative body of competitive reaction studies, has focused on various types of follow-the-leader behaviors. In his book, Knickerbocker (1973) presented the U.S. MNEs' strong drive toward new overseas investment, which was undertaken to counter each other's foreign investment decisions. His research analyzed the companies' bunching behavior as follower firms' reaction to the first mover's action, focusing on the followers' countermove or responsive behavior as an attempt to minimize risk. Knickerbocker (1973) also pointed out that this behavior is observable and can occur in oligopolistic industries in which companies are mutually recognizable. Since then, other studies have also empirically documented rival firms' matching behavior, including bunching behaviors, mostly in foreign direct investment (FDI) and foreign market entry (Flowers, 1976; Makino & Delios, 2000; Yu & Ito, 1988).

So far, however, competitive reaction studies have not investigated firm's CSR behaviors. Only a few studies have identified the influence of competitors' CSR implementation on a firm's CSR behavior (Lin & Chih, 2016) and very little is known about it. In other words, this competitive reaction perspective has not yet been fully considered in the existing CSR literature.

Specifically, with respect to research on the determinants of the diffusion of CSR adoption, this study tries to apply a new perspective based on competitive reaction literature as well as multiple traditional theories developed and utilized in the CSR and diffusion literature. This study therefore develops hypotheses and a model to incorporate this perspective to investigate the factors that explain the spread of CSR across firms.

CHAPTER 4. RESEARCH FRAMEWORK AND HYPOTHESES

4.1 Industry competitors' behavior

One of the first empirical studies of the follow-the-leader phenomenon was done by Knickerbocker (1973), and a stream of research on bunching behavior in FDI followed this study. Previous international business literature refers to this behavior by MNEs as an oligopolistic reaction (e.g., Knickerbocker, 1973; Kogut & Chang, 1991; Yu & Ito, 1988). In very competitive markets, companies seek to strengthen their positions by checking themselves against competitors in the same industry market. Yu and Ito (1988) reported that firms' reactions to competitors' behavior depends on the types of competition within an industry. More recently, Rose and Ito (2008) analyzed Japanese automobile manufacturing firms' overseas investment decisions in terms of location and timing. Contrary to previous studies, they found that Japanese automobile firms tend to avoid overseas markets where competitors already exist. Moreover, the timing of entry into an overseas market is likely to be delayed if the foreign market is crowded with competitors (Rose & Ito, 2008). In other words, competitive rivalry within the same industry does not always lead to mimetic behavior; it may instead lead to an opposite response. Thus, although they are similar institutional pressures exerted by the external environment, competitive rivalry (oligopolistic behavior) and mimetic isomorphism (social legitimacy) can be different in nature and be measured separately.

The effort to implement CSR can similarly contribute to corporate profits and competitiveness (Gueterbock, 2004; Juholin, 2004). That is, even though profit is not guaranteed at the outset, a rival company's adoption and implementation of a CSR strategy can motivate other firms operating in the same industry to do the same (Lieberman & Asaba, 2006). Follower

firms may view a non-adoption decision as potentially leading to unavoidable penalties or threats to their performance (Haberberg, Gander, Rieple, Helm, & Martin-Castilla, 2010; Haberberg et al., 2007; Nikolaeva, 2014). Meanwhile, some pioneering firms may try to provoke competing firms to become involved in CSR activities, expecting them to pay a similar additional cost from CSR implementation (Vogel, 2005). Consequently, initiation by the first movers is likely to result in the attention and participation of its peer group of companies in the same industry, leading to quicker diffusion among them.

Hypothesis 1. Earlier adoption by industry peers is related to quicker diffusion among firms in the same industry.

Among an industry's rival companies, however, industry leadership status of specific competitors might affect a firm's reaction behavior in different ways (Giachetti & Lampel, 2010). More specifically, an industry leader, as the strongest competitor within a market, can be targeted for competition or challenge (Smith, Ferrier, & Grimm, 2001); however, it can simultaneously be a role model or reference for imitation (Giachetti & Lampel, 2010; Verbeke & Tung, 2012) since it is often perceived as using best practices. Thus, if an industry leader initiates a specific action as an early mover, the other firms within the industry would be expected to respond, not only because it is the action of a competitor, but also because it is the action of a successful player to benchmark or follow (Haveman, 1993; Verbeke & Tung, 2012). Previous researchers have also noted that a leader firm's actions are perceived to be more serious than those of other firms (Bikhchandani, Hirshleifer, & Welch, 1998; Elnathan & Kim, 1995; Giachetti & Lampel, 2010). However, if the action is undertaken by non-leader competitors, the

reaction it provokes can be explained as more purely competitive rivalry. The behavior of a non-leader is more likely to motivate firms within the same industry to respond in an attempt to compete against a rival and match its performance. The preceding discussion suggests further refinement of the industry competitor variable for additional analysis of the Hypothesis 1. This analysis is described in a later section.

4.2 Mimetic behavior: Non-competitors' behavior

Firms sometimes try to behave in a manner they consider as conforming to the various rules and norms of the social and institutional environment (DiMaggio & Powell, 1983; Haveman, 1993). Institutional theory explains the relationship between an organization and its environment (Meyer & Rowan, 1977; Scott, 1995). To deal with uncertainty in a given environment, firms observe and follow the previous actions of other firms as a way to minimize risk (DiMaggio & Powell, 1983; Haveman, 1993).

This corporate effort to adapt to the social and institutional environment through mimetic behavior shows that firms face various types of social and institutional pressure (DiMaggio & Powell, 1983). Accordingly, as a business organization in a society, a firm may be willing to increase its resemblance to other firms in the same society and environment (Haveman, 1993) and may seek to do so for reasons that go beyond attaining a competitive advantage. Previous literature on imitative business behavior has examined various topics and phenomena across different industries (Lieberman & Asaba, 2006), including imitation of acquisition activities (Haunschild, 1993), the adoption of new formats by radio stations (Greve, 1995), and the adoption and implementation of total quality management (Westphal, Gulati, & Shortell, 1997).

In earlier studies, institutional framework was applied in an effort to understand and explain CSR as a means of attaining social legitimacy (Campbell, 2007; Husted & Allen, 2006; Yang & Rivers, 2009). That is, CSR adoption or implementation by a company can also be understood as a response to pressures created by other firms' CSR practices. Firms' CSR adoption decisions can proceed from their mimetic isomorphism, even without coercive or normative pressure, which thereby promotes CSR diffusion within the larger business community.

Research on the diffusion of innovations identifies compatibility as one of the characteristics that can determine the rate at which an innovation is adopted. Thus, according to Rogers (2003), decisions regarding innovations are based on a cost-benefit analysis that takes uncertainty into account. Rogers (2003) defined compatibility as "the degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of potential adopters" (p. 15). The compatibility of an innovation can thus reduce the risk of uncertainty and increase the rate of adoption.

In terms of CSR, compatibility is also related to whether this new management paradigm is readily acceptable or applicable to corporations. Potential adopters can speculate about compatibility by observing the adoption behavior of the first adopters. When they make decisions, firms try to minimize potential costs, risks, and uncertainty by considering various internal and external factors. Prior to the decision to adopt CSR, they tend to be affected by other firms' behavior. The early adopters' behavior serves to assure other firms about the compatibility of CSR.

Hypothesis 2. Mimetic behavior affected by the earlier adoption of CSR by non-competitors is related to its quicker diffusion among the firms in a country.

4.3 International listing

Following institutional theory, organizational behavior can be understood as a response or reaction to an organization's institutional environment (Marano & Kostova, 2016; Shi, Magnan, & Kim, 2012). Accordingly, a firm, as a member of a society and a social system, is expected to not ignore explicit or implicit influences or pressure exerted by an institutional environment when making a corporate-level decision (DiMaggio & Powell, 1983). It remains important for firms to be compatible with the institutional environment to which they belong, whether to enable them to adapt themselves to that environment or to achieve organizational legitimacy (Meyer & Rowan, 1977; Meyer & Scott, 1983). As firms are exposed to more than one institutional environment, they encounter more complex and difficult situations (Greenwood, Raynard, Kodeih, Micelotta, & Lounsbury, 2011). This circumstance requires firms to find and customize how they deal with such situations, and it can lead to changes in organizational behaviors or corporate practices (Gamerschlag, Möller, & Verbeeten, 2011; Matten & Moon, 2008).

Multinational enterprises, by definition operating in more than one country, are expected to comply with the different expectations and pressures of their multiple institutional environments, resulting in a diversity of organizational practices (Kostova & Roth, 2002). The challenges that MNEs have to cope with have inspired abundant academic research on organizational behaviors, including the CSR of MNEs in multiple institutional environments

(Greenwood & Suddaby, 2006; Marano & Kostova, 2016).

Firms listed on foreign stock exchanges are also exposed to, monitored by, and evaluated by additional international stakeholders in multiple countries with diverse institutional contexts (Boubakri, Ghoul, Wang, Guedhami, & Kwok, 2016; Choi, 1973). One of the primary reasons for firms to cross-list is to have access to international financial markets and be able to raise capital funds from investors in those markets (Bancel & Mittoo, 2001; Höllerer, 2013; Meek & Gray, 1989). However, firms listed on foreign stock exchanges may be competing for capital with locally listed companies from a relatively disadvantageous position (Meek & Gray, 1989). That is, as foreign firms in the stock market, cross-listed firms are required not only to observe and implement the mandatory regulations in foreign regulatory environments, but also to make serious efforts to be better recognized in the market beyond the stakeholders' expectations due to an increase in corporate visibility (Cooke, 1989; Saudagaran, 1988; Shi et al., 2012). These factors can facilitate voluntary disclosure of financial and non-financial information by firms (Cooke, 1989; Meek & Gray, 1989) as a way for them to demonstrate responsible performance (Cooke, 1989).

Previous empirical evidence also suggests that a relationship exists between overseas listing status and a firm's CSR (Bosco & Misani, 2016; Cooke, 1989; Hossain, Perera, & Rahman, 1995). Reverte (2009) found that the number of foreign stock exchanges on which Spanish firms are listed is positively associated with their CSR ratings. Examining the effect of U.S. stock exchange listings on the CSR disclosures of German companies, Gamerschlag et al. (2011) found a similar positive relationship. Boubakri et al. (2016) found that cross-listing in the U.S. market is also a significant variable explaining improved CSR performance by firms. They

further reported that the significant and positive effect of cross-listing increases over time.

Hypothesis 3. Internationally listed firms tend to adopt CSR earlier than firms not listed internationally.

4.4 Firm size

A review of the literature reveals that most, though not all, previous empirical studies have documented a positive association between firm size and CSR (Reverte, 2009; Udayasankar, 2008). This relationship can be analyzed from many different perspectives, including a relationship with (or pressure from) stakeholders, a firm's visibility, and resource accessibility. Brower and Mahajan (2012), applying the perspective of stakeholder scrutiny, argued that larger firms are more likely to engage in CSR in diverse areas in order to respond to stakeholder expectations. In the same vein, stakeholder scrutiny can be understood in terms of stakeholder interest or expectations, which can also be linked to visibility. According to Watts and Zimmerman (1986), larger companies with stronger market power tend to garner more public attention. Moreover, Udayasankar (2008) explained that larger firms are more likely to face greater pressure because they are more visible, while smaller firms are less likely to be socially responsive owing to their lower visibility and reduced pressure. That is, larger firms are more likely to be exposed to external pressure from the institutional environment. Udayasankar (2008) supported this argument empirically by examining SMEs, finding a U-shaped relationship between participation in CSR and firm size.

This relationship can be explained as a matter of access to resources. According to Brammer and Millington (2006), larger organizations tend to be more socially responsive, owing

to greater visibility, higher stakeholder sensitivity, and better access to resources. Larger firms are able to exploit abundant organizational resources in pursuit of implementing better corporate environmental strategies that may result in better performances (Bowen, 2000; Sharma, 2000). In contrast, smaller firms are unable to access such resources and find it difficult to implement such strategies. Similarly, to adopt and implement CSR early, and thereby possibly enhance their reputations, firms must possess the necessary internal resources. Because large firms with more resources can influence the timing of CSR adoption, a positive association between the size of a corporation and the early adoption of CSR is expected.

Hypothesis 4. The size of a firm is positively associated with early adoption of CSR.

4.5 Firm profitability

One of the frequently discussed topics in the field of CSR is its relationship with CFP (Lu & Liu, 2014). Since the first empirical study on this relationship in 1972, the topic has been the subject of numerous investigations (Grewatsch & Kleindienst, 2017; Margolis & Walsh, 2003). Reviews of this literature reveal inconsistent results, with many types of relationships possibly existing between CSR and CFP, such as positive or negative, insignificant, U-shaped or inverted U-shaped, and asymmetric (Grewatsch & Kleindienst, 2017). Among the previous studies, in particular, many have assumed that the relationship between a corporate policy of social disclosure and profitability is positive (Reverte, 2009).

Interestingly, however, many of the prior studies considered CSR as an independent variable and CFP as a dependent variable in the relationship, although no causal relationship was assumed. As such, these studies tried to explain how CSR could contribute to the CFP. This

approach is somewhat different from the current study because I consider the relationship between CFP and CSR, explaining firm profitability as one of the drivers of CSR.

A firm's internal resources, including its financial resources, can be exploited when necessary. In other words, the required economic resources are readily available for profitable firms (Cowen, Ferreri, & Parker, 1987; Hackston & Milne, 1996; Pirsch, Gupta, & Grau, 2007; Reverte, 2009). Meanwhile, less profitable companies are more likely to put effort toward generating financial earnings than reporting their social and environmental performance (Reverte, 2009; Roberts, 1992; Ullmann, 1985). Thus, I expect a positive relationship between a firm's economic performance and early adoption of CSR.

Hypothesis 5. A firm's profitability is positively associated with the early adoption of CSR.

4.6 Firm age

Among the variables that are related to the motivation to adopt CSR, corporate age or firm maturity, despite being a possibly critical factor, has been understudied in the literature. Recently, examining the influence of firm maturity on CSR, Withisuphakorn and Jiraporn (2015) found that older firms tend to invest more in CSR and that the degree of influence varies by CSR category. These researchers argued that firm maturity has a larger impact on the areas of diversity and the environment than on human rights and products.

Because older firms are expected to have more intangible assets available to initiate the adoption and implementation of CSR policies, firms with long years of operational experience and know-how are better able to cope with the challenges arising from a new management policy

and the resulting internal changes. Such firms are more likely to be willing to adopt and implement CSR. Many of these companies, for example, may have already experienced disclosure of financial or non-financial information, and some may also have reported their own environmental information. These actions lead them to adopt and implement CSR, which suggests the following hypothesis:

Hypothesis 6. The longer a firm's history, the earlier it is expected to adopt CSR.

4.7 Average years working for a company

In terms of corporations' representative stakeholder groups, most are categorized as external. External stakeholders include consumers, the supply chain, the community, and governments and NGOs, and they exclude shareholders and employees (Rodrigo & Arenas, 2008). Previous researchers in the CSR field have paid little attention to the employee stakeholder group in comparison with external stakeholder groups (Rodrigo & Arenas, 2008).

Among the multiple stakeholder groups, employees have a particularly important association with firms since they provide the workforce, which can be a source of corporate competitive advantage (Branco & Rodrigues, 2006). As an important stakeholder group and as human capital, employees with skills, experience, and knowledge need to be well managed in order for the company to operate efficiently; at the same time, companies are expected to maintain and satisfy the expectations of their employees, who can decide to leave if they are not satisfied. In addition, from the firms' perspective, the existing human resources may not be completely replaceable simply by hiring new employees. In other words, employees should be treated differently from resources that can be substituted relatively easily.

Branco and Rodrigues (2006) have pointed out that CSR can contribute to a firm's competitive advantage directly and indirectly by attracting better new hires and improving employees' motivation, commitment, and loyalty. They also show that CSR can reduce staff turnover and save on costs for recruitment and training. The positive association between CSR and a firm's employees has been demonstrated in many empirical studies (Albinger & Freeman, 2000; Backhaus, Stone, & Heiner, 2002; Greening & Turban, 2000; Peterson, 2004; Turban & Greening, 1997).

Similarly, a firm's adoption and implementation of CSR is related to human resource management in terms of the need to secure and retain current employees in order to prevent brain drain. Meeting this need through CSR may contribute to a firm's competitive advantage. This study therefore proposes the following hypothesis:

Hypothesis 7. The more established a firm's workforce is in terms of employee tenure, the more likely the firm is to adopt CSR early.

CHAPTER 5. METHODOLOGY AND DATA

5.1 Empirical Analysis

5.1.1 *Main analysis*

The main research task of this study is to examine the potential determinants of whether or not a company adopts CSR, leading to CSR diffusion across companies in a country, and if adopted, how many years elapsed before its adoption. In order to incorporate the time-to-adoption factor, this study employs event history analysis methods using a discrete-time logistic regression model (Allison, 1982). This approach accounts for the longitudinal relationship between the potential determinants and the diffusion of CSR adoption, incorporating the dynamics of the change in firms' behavior as a result of CSR adoption and the variation in explanatory variables over time (Allison, 1982). This research therefore explores the factors that are associated with earlier CSR adoption for each company, leading to eventual diffusion across firms within the same country context.

In addition, firms are nested within particular industries, which are characterized according to products and services. To account for the potential lack of independence in the error structure resulting from the nested nature of the firm-level data, this study also uses a hierarchical linear modeling (HLM) approach, which includes industry effects based on the 110 different industry groups classified by the KRX (Korea Exchange) industry code, to estimate the models. The multilevel and multiple effects random-parameter HLM models are estimated using a maximum simulated likelihood approach (Greene, 2007).

Empirical study on the potential determinants of earlier voluntary CSR adoption leading to diffusion across firms includes seven explanatory variables and a control variable: industry

competitors' behavior, non-competitors' behavior, international listing, firm size, firm profitability, firm age, average years working for a company, and industry's environmental and social sensitivity. Except for the control variable, all seven independent variables in my models are time-varying variables, which were observed annually. Throughout the analysis, a 1-year time lag between the CSR adoption (dependent variable) and the independent variables is assumed unless otherwise noted. For instance, a firm's CSR adoption decision in 2012 may be affected by its competitors' CSR behavior, non-competitors' CSR behavior, foreign stock market listing, and corporate characteristics in 2011.

In particular, in terms of the firms that belong to environmentally and socially sensitive industries, the potential effect of the industry sensitivity on firms' CSR needs to be considered (Reverte, 2009). Thus, a separate set of discrete-time logistic regression models with a control variable of industry sensitivity are estimated.

5.1.2 *Additional analysis: How the role of determinants changes over time*

Since the primary focus of the empirical analysis is on identifying the factors associated with firms' earlier CSR adoption decision leading to more rapid CSR diffusion across firms within a country, additional analysis is required to identify the determinants of different timing of CSR adoption—early, middle, or late adoption. Even among the group of CSR adopter firms during the 12-year observation time period, the timing of CSR adoption differed. In this sample of 711 listed firms, with three pioneering CSR adopters in the first year (2003), CSR practice was adopted by 15 companies during the first 4-year period and by 90 listed companies in total during the whole 12-year observation period. This additional analysis thus explores how competitive pressure, institutional (mimetic) pressures, and company characteristics lead to the

different timing of the CSR adoption decision across the diffusion process for early, middle, and late adopters. Based on the CSR adoption timing of the median adopters among the sample companies, the middle timing is defined as occurring during the fifth to the eighth year. Therefore, a timing prior to the fifth year is defined as early, and a timing after the eighth year is late.

Using the multinomial logistic regression model with a reference group of middle timing adopters, the likelihood of each of the three different timings based on the explanatory factors is examined. The probabilities of being in a group of early adopters and of being in a group of late adopters are compared to the probability of being in the reference group of middle adopters (Menard, 2002). If the difference in the probability of belonging to each timing category is identified, the next step is to further examine the relationship between the predictors and each timing category of CSR adoption. For analysis, a discrete-time logistic regression model (Allison, 1982) is employed. This permits us to explain how the role of determinants changes over time.

5.2 Data and Sample

5.2.1 *Data for main analysis*

Data for the present study consist of a sample of 711 Korean publicly traded firms, including 90 firms with CSR reporting experience and 621 firms with no reporting experience. A total of 7,085 firm-year observations corresponding to the sample firms are available for the observation period of 2003 to 2014. As a country without a mandatory CSR implementation or reporting requirement, Korea provides the opportunity to focus on the determinants of a firm's voluntary adoption, eliminating alternative explanations relating to the direct influence of

governmental requirements.

The longitudinal data were collected from multiple archival sources: (a) corporate annual reports, (b) the DART (Data Analysis, Retrieval, and Transfer system provided by Financial Supervisory Service in Korea; http://englishdart.fss.or.kr), (c) the Mergent online database (http://www.mergentonline.com), (d) company websites, (e) stand-alone CSR reports, (f) the Global IPO guide by Samil PricewaterhouseCoopers (PwC; http://www.pwc.com/kr/en), and (g) press releases. All publicly traded companies in Korea are required to disclose their financial information in accordance with Korean laws or regulations. Since my sample included listed companies only, most of the data were publicly available from archival sources.

Annual reports of sample companies were used as one of the main sources of firm-level data. The DART, an official repository of Korea's corporate filings, provided the list of companies in the stock market, basic corporate information, and companies' electronically disclosed filings, including annual and audit reports, financial statements, and so forth. In addition, the Mergent online database was used to supplement historical data. In terms of the international listing data, the information was initially collected from the Global IPO guide by Samil PwC and later cross-checked with annual reports. The guide provides a list of Korean companies on major foreign stock exchanges, such as New York Stock Exchange (NYSE), London Stock Exchange (LSE), Japan Exchange Group (JPX), Singapore Stock Exchange (SGX), and so forth, between 1994 and 2014. As of 2015, Chinese stock exchanges had not yet allowed foreign companies to list shares on their stock markets.

For the CSR reporting information, most reporting firms publicize and post their annual stand-alone CSR reports on the company website. Information on whether a company has ever

reported, and, if so, when reporting began, was initially collected from each company's official website or from media sources and was cross-checked with CSR reports. Regarding the format of CSR information disclosure, no standardized requirement exists. Whether or not the CSR reporting follows the Global Reporting Initiative (GRI), the most widely used reporting guidelines, is thus not included in my analysis. According to the KPMG survey (2013), however, 78% of global firms apply this universal GRI framework. In terms of the firms in the sample, more than 85% of reporting firms in Korea voluntarily referred to the GRI guidelines in their initial CSR reports.

The original sample pool included 742 companies listed in the KOSPI (Korea Composite Stock Price Index) market as of 2014. My final sample of 711 unique companies includes 90 companies that had initiated CSR performance reporting at any point before the end of 2014, as well as firms that had not yet initiated CSR performance reporting by then. In the final sample of 711 companies, about 12% had initiated CSR performance disclosure at any point before the end of 2014. The majority of the final sample thus consists of firms that had not initiated CSR adoption. The sample includes companies from 110 industries including both the manufacturing and service industrial sectors: Food & Beverages, Textile & Apparel, Paper & Wood, Chemicals, Metal, Machinery, Distribution (Wholesale & Retail), Electricity & Gas, Construction, Transportation, Communication, Finance, and so forth. There are approximately 6.5 listed companies on average in each industry. In my sample, 95 out of 110 industries have no more than 12 listed companies each. This industry distribution allows application of the oligopolistic reaction explanation in the study (Yu & Ito, 1988).

The period of observation for this study was from 2003, when the first CSR report was

published by three companies in Korea, to 2014. Since the observation starts with 2003, the first year of CSR reporting in Korea, there is no left-censoring issue in this study. For the 90 companies adopting CSR, my observation continues until the point of adoption; for the remaining companies, it continues until the end of the study period. The observations for remaining companies are treated as right-censored observations in my data. Information regarding either the cessation of reporting or the cycle of reporting was not considered in this study.

5.2.2 *Data for additional analysis*

Based on the same empirical dataset, minor revisions were made for further analysis on how the role of determinants changes over time. Since the focus of this additional analysis is on identifying the factors associated with the three different timings of CSR adoption, the year of observation was categorized into early (years 1 to 4), middle (years 5 to 8), and late (years 9 to 12) time periods. Depending on their timing of adoption, firms were redefined as early, middle, and late adopters. For analysis, these three separate sub-datasets, each including early, middle, and late observations, were prepared. All other explanatory variables included are essentially the same as the main dataset.

5.3 Variables

5.3.1 *Dependent variable*

In this research, the dependent variable is whether CSR reporting was initiated during the observation period, which captures the CSR adoption by a company, and if initiated, how many years elapsed since the pioneering firms' initial reports until that company began reporting.

Consistent with the definition of CSR in this study, I can judge whether a firm is voluntarily involved in the CSR effort of communicating with its stakeholders regarding its commitment to responsible business by observing its voluntary CSR reporting. This measurement is appropriate because it is readily measurable and comparable across companies.

In previous studies, frequently used proxies for CSR include the following: CSR ratings or scores provided by third-party agencies (Attig, Boubakri, El Ghoul, & Guedhami, 2016), such as MSCI ESG data, previously known as the KLD database (Kinder, Lydenberg and Domini Research and Analytics, Inc.), for firms listed in the United States (Attig et al., 2013; Barnea & Rubin, 2010; Kang, 2013; Siegel & Vitaliano, 2005); the reputation index (e.g., Fortune rating) (Cochran & Wood, 1984; Luo & Bhattacharya, 2006); CSR spending or charitable expenditure (Fombrun & Shanley, 1990; Lev et al., 2010); and CSR initiative membership or CSR reporting or non-financial information disclosure (Abbott & Monsen, 1979; Anderson & Frankle, 1980; Cho, Lee, & Park, 2012).

However, using the secondary data such as CSR ratings offered by third-party agencies, which is one of the popular measurements of CSR in prior studies, cannot eliminate the potential for arbitrary judgment or subjective interpretation. Further, measuring CSR adoption based on a firm's launch of a CSR program does not allow for comparisons because the format, contents, range, and focus of CSR programs can vary across firms and industries. It may also be even harder to pinpoint CSR initiation unless the information is officially disclosed.

In Korea, the first year of CSR reporting was 2003, when three publicly traded firms (Hanwha Chemical, Hyundai Motor Company, and Samsung SDI) began doing so. The dependent variable was measured from the initiation of CSR reporting and recorded categorically

as either 0 or 1, for non-reporting years or for the reporting year, respectively. For example, in 2003, among the sample companies, only those three firms have a value of 1 for their dependent variable, while the rest of the firms have 0. During the observation period, each of the 90 companies with CSR-reporting experience in the sample have a single 1, corresponding to the commencement of CSR reporting. Firms without any CSR reporting experience, on the other hand, have all 0s and not a single 1.

5.3.2 *Independent variables*

Industry competitors' behavior: This study measures the number of competitors in the same industry (*Competitors*) that adopted CSR in previous years. Based on the industry categories assigned by the Korean stock exchanges, all companies in my sample were assigned a six-digit industry code. In this paper, companies with the same industry code are considered competitors, peers, or rivals in the same industry. The sample firms were classified into 110 different industry groups based on the KRX industry code. Within the same industry group, the number of reporting firms increased from 0 in 2003 and grew each year in which CSR-reporting firms appeared in the same industry.

Previous studies, however, did not simultaneously consider two related (but possibly different) factors: competitive reaction and mimetic isomorphism. Among the industry competitors, an industry leader may exert dual effects associated with its sheer size as a major competitor whose actions affect the economic performance of smaller rivals and with its socially legitimate status. The industry leader's behaviors may be regarded as socially legitimate (in addition to the competitive rivalry consideration), while a non-leader's actions may not be considered socially legitimate by other rivals because of the non-leader's lower social status

within their peer industry group. This potential concern leads to further refinement of the industry competitor variable and to additional examination.

In this study, an industry leader is defined as a firm with the largest sales volume within an industry in a given year. Thus, the CSR adoption behavior of a leader firm and that of non-leader rival firms within the same industry were measured separately. The *Leader* variable is assigned a value of 1 if it adopted CSR previously, and 0 otherwise. The remaining competitors are regarded as non-leader rivals; the *Non-leader rivals* variable was measured by the cumulative number of the non-leader competitors that adopted CSR each year. Incorporation of both variables allows isolation of the pure competitive pressure by non-leader competitors only and a focus on how it plays a role, controlling for the potential dual effect of the industry leader's behavior. Among the 110 industry leaders in my sample, only 22 industry leaders were CSR adopters.

Mimetic behavior: Two different measurements of mimetic behavior were used. First, in order to discern the potential influence of mimetic behavior, the cumulative number of CSR adoption for all non-competing firms outside the industry (*Mimetic All*) was observed and measured. Non-competitors have industry codes that differ from that of the focal company. The number of CSR-reporting firms among the non-competing firms was counted each year cumulatively going forward from 2003. Second, in order to identify mimetic behavior related to the more recent action or "social fads" in firms' CSR adoption behavior, the total number of newly reporting firms in a prior year among non-competing firm groups (*Mimetic Prior*) was separately observed and collected for the second measurement.

International listing: This variable was measured according to whether or not a focal firm

was listed on foreign stock markets each year during the observation period. I thus assigned the value of 1 if a firm was listed on one or more of the foreign stock exchanges and the value of 0 if it was not listed on any of the foreign stock markets. During the observation period, 16 out of a total of 711 sample companies had ever been listed on the international stock exchanges; none of them were delisted in the middle of the study.

Firm size: Since my sample consisted of many different types of industries, including the manufacturing and service sectors, the number of employees in the prior year was selected to be the measurement for each firm's size. This variable was collected from corporate annual reports. Logarithmic transformation was used to provide the model with stability.

Firm profitability: Return on assets (*ROA*) in the prior year was used as a proxy for profitability. This value was collected from annual reports or calculated from net income and total assets if the data were not provided.

Firm age: Each firm's age was defined as years of operation since its establishment and measured by "year of observation-year of establishment." The average age of companies listed in Korea as of 2015 was 37.8 years, with 51.5% of them being over 40 years old (LGERI, 2015). Each firm's age was calculated according to the founding year from the DART system and was standardized for estimation and interpretation.

Average years working for a company: Each firm also reported employee-related information, including employees' average years working for a company, which shows how long employees stay at a company on average. The average period may differ by industry, gender composition, or job function; however, such differences were not considered in this study. This information was collected from corporate annual reports or CSR reports. This *Working years*

variable was standardized for the model stability.

5.3.3 *Control variable*

Environmental and social sensitivity of the industry: In order to consider industry-specific characteristics that might affect a firm's CSR adoption behavior (Chiu & Wang, 2015), this study included an industry-level control variable. According to past research, some industries are more environmentally and socially sensitive: mining, oil and gas, chemicals, pulp and paper, steel and other metals, electricity, alcohol and tobacco, and transportation and utilities (Adnan, Staden, & Hay, 2010; Chiu & Wang, 2015; Liu & Anbumozhi, 2009; Reverte, 2009). Firms operating in those sensitive industries tended to be more involved in various CSR practices, including CSR information disclosure (Aerts, Cormier, & Magnan, 2008; Liu & Anbumozhi, 2009; Reverte, 2009). Thus, this research controlled for the industry effect of environmental and social sensitivity and included this factor in the statistical model. In order to determine if a focal firm's industry matched any of the environmentally and socially sensitive industry categories mentioned above, each firm's designated KRX industry classification code was checked. Then, firms that belong to environmentally and socially sensitive industries were assigned 1, and rest of the firms from less sensitive industries was all assigned 0 for analysis.

5.4 Procedure

The empirical analysis is intended to estimate a discrete-time logistic regression model, specifying how the CSR adoption decision may depend on the seven explanatory variables. Since the research question focuses on how likely the earlier CSR adoption decision is made, this method is useful in terms of capturing the every firm-year observation until the CSR is adopted

by each company during the observation period. In particular, in the event history analysis, the hazard rate should be considered a key concept for model development (Allison, 1984). This rate is defined as the probability of the occurrence of an event at a given point of time. In this study, hazard rate (P(t)) refers to the probability of making a CSR adoption decision within a particular year for those firms that have not previously adopted CSR.

The model is assumed to follow a logit function:

$$\log\left[\frac{P(t)}{1-P(t)}\right] = \beta' + \beta_1 x_1(t) + \ldots + \beta_k x_k(t) + \beta_0 x_0 \quad (5.1)$$

where *t* indicates the year of observation, β' refers to the intercept, and $\beta_{1\ldots k}$ indicates the coefficients for each explanatory variable for each year of observation. The odds ratio is calculated for easier interpretation by exponentiating the coefficients. In terms of the coefficient $\beta_{1\ldots k}$ for time-varying explanatory variables, it provides the information on the change in log-odds for one-unit change in each of the independent variables. The coefficient β_0 is for a time-constant explanatory variable, which does not change over time. The control variable is the only time-constant variable in the study and can be added at the end if needed. Thus, the full model for testing the hypotheses is as follows:

$$\log\left[\frac{P(t)}{1-P(t)}\right] = \beta' + \beta_1\, Competitors(t) + \beta_2\, Mimetic\ All(t) +$$
$$\beta_3\, International\ listing(t) + \beta_4\, Size(t) + \beta_5\, Profitability(t) + \beta_6\, Age(t) +$$
$$\beta_7\, Working\ years(t) + \beta_0\, Industry\ sensitivity \quad (5.2)$$

Table 1. Description of Variables

	Variable (Code)	Description
DV	CSR Adoption	If a firm discloses CSR performance
IV	Competitor's CSR behavior (Competitors)	Number of industry competitors which adopted CSR in previous years
	Non-leader competitor's CSR (Non-leader competitors)	Number of competitor's CSR - leader's CSR
IV	Non-competitor's CSR (Mimetic All)	Number of non-competitors which adopted CSR in previous years
	Non-competitor's CSR behavior in a prior year (Mimetic Prior)	Number of non-competitors which adopted CSR in each previous year
IV	International listing	If a firm is listed on foreign stock market(s)
IV	Firm size	Number of employees
IV	Firm profitability	Return on Assets (ROA) = net income / total assets
IV	Firm age	Years of operation = year of observation - year of establishment
IV	Average years working for a company (Working years)	How many years employees stay for a firm
CV	Environmental and social sensitivity of the industry	If a firm operates in one of the sensitive industries

CHAPTER 6. RESULTS

6.1 Results: Main Hypotheses Test

Table 2 displays the descriptive statistics of the sample data and correlation matrix among the main independent and dependent variables. Because of a concern with high multicollinearity, the variance inflation factor (VIF) was calculated. The highest VIF in the model with main independent predictors was less than 10, the threshold value suggested by Neter, Wasserman, and Kutner (1985), indicating that multicollinearity is not of significant concern in the study. Also, due to the same concern between *Mimetic All* and *Mimetic Prior*—two different measurements of institutional mimetic pressure given by non-competitors outside the industry—the variables are separately modeled in the analyses.

In Table 3, Models (1), (3), and (5) report the results of discrete-time logistic regression, and Models (2), (4), and (6) show the results of random parameter HLM discrete-time logistic regression, respectively. The results of the two methods are very similar. The coefficients associated with *Competitors* are positive and significant ($p < 0.01$) in Models (1)–(4), thereby lending support to Hypothesis 1. That is, each firm's adoption of CSR, which can lead to diffusion of CSR, is accelerated by its industry competitors' CSR adoption. In particular, the coefficients of Model (1) and (3) indicate that, for one unit increase in *Competitors* in each model, a 1.28 and 1.30 increase in the odds of CSR adoption is expected, respectively, holding all other predictors constant. Therefore, with each additional CSR adoption behavior among a focal firm's competitors, the odds of CSR adoption by the focal firm increase by 28% and 30%. Appendix includes the result of odds ratio for all explanatory variables. Furthermore, additional examination with non-leader competitors' CSR adoption behavior in Models (5) and (6) presents

consistent results, suggesting that the firm's socially responsible behavior may be motivated by purely competitive rivalry, after controlling for the presence of the industry leader's CSR and for possible mimetic isomorphism. Exponentiating the log odds coefficient yields a 1.34 increase in the odds of CSR adoption. That is, CSR adoption by non-leader competitors has a strong positive effect, increasing the odds of a focal firm's CSR adoption by 34%.

The coefficients associated with *Mimetic All* in Models (1) and (2), and *Mimetic Prior* in Models (3) and (4), are also positive and significant at $p < 0.05$. These results give support to Hypothesis 2, which holds that mimetic behavior associated with earlier adoption by non-competitors is related to quicker diffusion among the firms. Mimetic isomorphism resulting from non-competitor's CSR, however, increases the odds of CSR adoption by only 2%. Also, the test result of *Mimetic Prior* suggests that a focal firm's CSR adoption decision is likely to be prompted by a more recent social fad given by prior year's CSR behaviors by non-competitors. With each additional CSR adoption behavior among a group of non-competitors in a prior year, a 27% increase in the odds of a focal firm's CSR adoption is expected.

The results from the models provide support for Hypothesis 3, as the international listing is positively related to earlier adoption of CSR, leading to quicker diffusion of CSR. In each of the following models, this international listing variable is found to be consistently significant and positive at least at the $p < 0.05$ level. Being listed on foreign stock exchange increases the odds of CSR adoption by approximately 200% in Model (1), (3), and (5).

Table 2. Descriptive Statistics and Correlations

	0	1	1a	1b	2a	2b	3	4	5	6	7	Mean	SD
0. CSR (DV)												0.01	0.11
1. Competitors	0.03											0.70	1.25
1a. Non-leaders	0.03	0.95										0.46	1.01
1b. Leader	0.00	0.68	0.42									0.24	0.43
2a. Mimetic All	0.02	0.43	0.37	0.38								33.87	27.59
2b. Mimetic Prior	0.02	0.26	0.22	0.25	0.65							6.72	4.10
3. Int'l listing	0.17	-0.01	0.00	-0.03	-0.03	-0.02						0.01	0.09
4. Firm size	0.16	-0.18	-0.18	-0.11	-0.11	-0.09	0.17					6.05	1.35
5. Profitability	0.01	0.00	0.00	0.00	-0.04	-0.03	0.01	0.02				0.03	0.36
6. Firm age	-0.02	0.10	0.09	0.08	0.12	0.08	-0.07	0.09	-0.03			0.00	1.00
7. Working years	0.04	0.05	0.03	0.07	0.07	0.06	-0.01	0.24	0.00	0.22		0.00	1.00
8. Industry sensitivity	0.00	0.10	0.09	0.07	-0.01	-0.01	-0.01	-0.07	0.01	0.02	0.30	0.23	0.42

- Note: 4 = Firm size (log), 6 = Firm age (standardized), 7 = Working years (standardized).

Among the variables related to firm characteristics, the coefficient associated with the size of the firm is positive and significant ($p < 0.01$) in all models. The results lend support to Hypothesis 4. As expected, the larger firms listed in Korea display a tendency to adopt CSR earlier than smaller firms. The coefficients associated with a firm's profitability, however, are not statistically significant ($p > 0.10$) in all models. The results do not provide support for Hypothesis 5. Contrary to the assumption, the coefficients associated with the firm age variable are negative and significant ($p < 0.01$). The results suggest that younger firms with relatively shorter corporate histories are more likely to adopt CSR than are older firms with longer histories, thereby leading to quicker diffusion across firms. Hypothesis 6 is not supported. The coefficients associated with the employees' average working years are not statistically significant ($p > 0.10$). Thus, the regression results do not lend support for Hypothesis 7.

Table 4 reports the results of regressing the explanatory variables on earlier CSR adoption, including the control variable (industry sensitivity). When controlled for environmental and social sensitivity of industry, the analysis results remained mostly the same. With regard to the control variable, industry sensitivity itself was found to be positively associated with a firm's earlier CSR adoption and moderately significant ($p < 0.10$).

Competitive pressure from industry rivals was a significant variable throughout the set of models, at least at the 5% level. In terms of pure rivalry-driven competitive pressure, the results strongly support Hypothesis 1, showing positive and significant correlation with CSR adoption.

The estimated coefficients for institutional pressures from non-competitors (*Mimetic All*) were also positive and significant ($p < 0.05$) in Models (7) and (9), controlling for the industry sensitivity. These findings support Hypothesis 2, which assumed a positive association with

earlier adoption of CSR. In Models (8) and (10), the influence of recent social fads, non-competitors' CSR behavior in the prior year, was additionally found to be significantly related to a focal company's CSR adoption.

Consistent with Hypothesis 3, all models in Table 4 show that international listing has a positive and significant relationship with firm's earlier CSR adoption. This result suggests that firms are more likely to adopt CSR early if they are listed on a foreign stock exchange, as a result of being exposed to multiple institutional environments.

In addition, the test results from the analysis indicate that two variables among the firm-characteristics variables are significantly related to a firm's earlier CSR adoption, controlling for industry sensitivity. *Firm size* is positively associated with a focal firm's CSR adoption, whereas a negative relationship with *Firm age* was observed. Thus, Hypothesis 4 is supported, but Hypothesis 6 is not supported. However, neither *Firm profitability* nor *Working years* was significant in this analysis.

Table 3. Discrete-time Logistic Regression Analysis (1)
(standard errors in parentheses)

Variable	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)
Intercept	-13.13**	-9.30**	-13.08**	-9.26**	-13.04**	-9.23**
	(0.99)	(0.66)	(0.97)	(0.64)	(0.99)	(0.66)
1. Competitors (H1)	0.25**	0.17**	0.27**	0.19**		
	(0.09)	(0.06)	(0.09)	(0.06)		
1a. Non-leader rivals (H1a)					0.29**	0.21**
					(0.11)	(0.07)
1b. Leader (H1b)					0.02	0.01
					(0.28)	(0.20)
2a. Mimetic All (H2a)	0.02*	0.01*			0.02*	0.01*
	(0.01)	(0.01)			(0.01)	(0.01)
2b. Mimetic Prior (H2b)			0.24*	0.17*		
			(0.11)	(0.08)		
3. Int'l listing (H3)	1.11*	0.78**	1.09*	0.77**	1.09*	0.77**
	(0.44)	(0.25)	(0.43)	(0.25)	(0.44)	(0.26)
4. Firm size (H4)	1.02**	0.72**	1.02**	0.72**	1.01**	0.71**
	(0.09)	(0.06)	(0.09)	(0.06)	(0.09)	(0.06)
5. Profitability (H5)	0.18	0.13	0.17	0.12	0.18	0.13
	(0.46)	(1.60)	(0.49)	(1.63)	(0.45)	(1.61)
6. Firm age (H6)	-0.32**	-0.23**	-0.33**	-0.23**	-0.32**	-0.22**
	(0.11)	(0.08)	(0.11)	(0.08)	(0.10)	(0.08)
7. Working years (H7)	0.05	0.04	0.05	0.04	0.05	0.03
	(0.10)	(0.08)	(0.10)	(0.08)	(0.10)	(0.08)
N	7085	7085	7085	7085	7085	7085
$^{\dagger}p < 0.10$, *$p < 0.05$, **$p < 0.01$	Discrete Time Logistic	D.T.L. Random Parameter HLM	Discrete Time Logistic	D.T.L. Random Parameter HLM	Discrete Time Logistic	D.T.L. Random Parameter HLM

Table 4. Discrete-time Logistic Regression Analysis (2) with a control variable
(standard errors in parentheses)

Variable	Model (7)	Model (8)	Model (9)	Model (10)
Intercept	-13.56**	-13.51**	-13.47**	-13.42**
	(1.03)	(1.01)	(1.03)	(1.01)
1. Competitors (H1)	0.23*	0.26**		
	(0.09)	(0.09)		
1a. Non-leader rivals (H1a)			0.27*	0.30**
			(0.11)	(0.11)
1b. Leader (H1b)			0.04	0.07
			(0.28)	(0.28)
2a. Mimetic All (H2a)	0.02*		0.02*	
	(0.01)		(0.01)	
2b. Mimetic Prior (H2b)		0.25*		0.25*
		(0.11)		(0.11)
3. Int'l listing (H3)	1.05*	1.03*	1.03*	1.01*
	(0.44)	(0.44)	(0.44)	(0.44)
4. Firm size (H4)	1.06**	1.06**	1.05**	1.05**
	(0.09)	(0.09)	(0.09)	(0.09)
5. Profitability (H5)	0.18	0.17	0.18	0.17
	(0.52)	(0.55)	(0.51)	(0.55)
6. Firm age (H6)	-0.32**	-0.32**	-0.32**	-0.32**
	(0.10)	(0.10)	(0.10)	(0.10)
7. Working years (H7)	-0.00	-0.00	-0.00	-0.00
	(0.11)	(0.11)	(0.11)	(0.11)
8. Industry sensitivity	0.49†	0.49†	0.47†	0.47†
	(0.28)	(0.28)	(0.28)	(0.28)
N	7085	7085	7085	7085
$^{\dagger}p < 0.10$,	Discrete	Discrete	Discrete	Discrete
$*p < 0.05$,	Time	Time	Time	Time
$**p < 0.01$	Logistic	Logistic	Logistic	Logistic

6.2 Results: Additional Test

The results of analysis on how the role of determinants changes over time are provided in Table 5. For each of three different groups that were categorized depending on the observation period, three separate sets of discrete-time logistic regression analysis were performed. This analysis provides further explanation on the potential determinants of competitive pressure, institutional (mimetic) pressures, and firm characteristics that might play a role in determining early, middle, or late timing of CSR adoption.

6.2.1 *Early timing adoption*

As shown in Table 5, the result of early timing observations between years 1 and 4 was different from the main model estimations in Tables 3 and 4. CSR behavior of *Competitors* was not yet a significant predictor in this early period ($p > 0.10$). Among the pressures exerted by the external environment, mimetic pressure from companies outside a firm's industry (*Mimetic All*) was the only positive and statistically significant factor at the $p < 0.10$ level. *International listing*, however, showed no significant association with a focal firm's adoption of CSR ($p > 0.10$). In terms of firm characteristics, only *firm size* had a positive relationship with CSR adoption of a focal company even in the early period ($p < 0.01$). This finding is consistent with previous main analysis results. In addition, *industry sensitivity* does not have a statistically significant association with a firm's CSR adoption.

6.2.2 *Middle timing adoption*

During the observation period in the middle timing of years 5 to 8, some changes appeared in the role of explanatory variables on earlier CSR adoption in Model (12). In terms of *industry sensitivity*, a positive relationship with a firm's CSR adoption is apparent for this timing.

Industry *competitors*' CSR behavior becomes a marginally significant predictor at the 11% level, having a positive association with CSR adoption. In contrast, institutional mimetic pressure (*Mimetic All*) becomes statistically not significant ($p > 0.10$). *International listing*, however, seems to be a positive and marginally significant predictor at the 11% level. Among the variables of firm characteristics, *firm size* remains positive and significant ($p < 0.01$) and *firm age* becomes a significant predictor ($p < 0.10$), working in the opposite direction. This result indicates that younger firms would be more likely to adopt CSR in this middle timing.

6.2.3 *Late timing adoption*

In the last 4 years of observation period between year 9 and year 12, a different effect of explanatory variables was found compared with the early and middle timing. Each firm's CSR adoption was positively associated with its industry *Competitors*' CSR adoption behavior ($p < 0.10$). Institutional mimetic pressure from players outside a firm's focal industry (*Mimetic All*) was no longer a significant predictor ($p > 0.10$). In addition, *international listing* becomes a statistically not significant factor ($p > 0.10$) in this late timing. However, both *firm size* and *firm age* are consistently significant predictors of earlier CSR adoption at the $p < 0.01$ level, with the opposite direction of *firm age*.

Table 5.

Discrete-time Logistic Regression Analysis (3) with Early/Middle/Late timing observations
(standard errors in parentheses)

Variable	Early Model (11)	Middle Model (12)	Late Model (13)
Intercept	-17.44** (2.90)	-11.74** (1.27)	-10.75** (1.79)
1. Competitors (H1)	-0.15 (1.12)	0.27 (0.17)	0.21† (0.11)
2. Mimetic All (H2)	0.18† (0.10)	0.01 (0.02)	0.00 (0.02)
3. Int'l listing (H3)	0.79 (0.93)	1.11 (0.68)	0.69 (1.10)
4. Firm size (H4)	1.49** (0.32)	1.04** (0.15)	0.93** (0.14)
5. Profitability (H5)	-0.12 (3.99)	2.47 (2.07)	-1.04 (1.69)
6. Firm age (H6)	0.15 (0.28)	-0.30† (0.16)	-0.48** (0.17)
7. Working years (H7)	0.10 (0.28)	0.07 (0.17)	-0.10 (0.17)
8. Industry sensitivity	0.74 (0.70)	1.00* (0.39)	-0.65 (0.63)
N	2244	2382	2459
†$p < 0.10$, *$p < 0.05$, **$p < 0.01$	Discrete Time Logistic	Discrete Time Logistic	Discrete Time Logistic

CHAPTER 7. DISCUSSION AND CONCLUSIONS

7.1 Concluding discussion

This research investigated the determinants of diffusion of voluntary CSR adoption, with the first disclosure of CSR performance as a proxy, by empirically analyzing competitive pressure, institutional factors, and corporate characteristics of publicly traded Korean firms with and without CSR reporting experience. Additionally, how each of those potential predictors is related to adoption timing was further analyzed.

Consistent with the expectations, my findings suggest that firms' CSR adoption is positively associated with the behavior of rival firms that are competing in the same industry sector. The results indicate that industry competitors' adoption of CSR, as a competitive pressure, may induce other firms to initiate adoption themselves. I further found that pure competitive rivalry also leads firms to exhibit socially responsible behavior, as shown by the positive coefficient of non-leader rivals, controlling for industry leader's potential dual effect as a role model. This finding supports and extends previous research concerning diffusion theory (Rogers, 1962) and oligopolistic reaction (e.g., Knickerbocker, 1973). That is, a firm's CSR adoption decision can also be understood and explained as a competitive reaction to its rivals' behavior, as found in previous studies that primarily focused on oligopolistic reaction to FDI decisions. In addition, competitor's CSR behavior was found to be more effective in motivating other firms during the middle and late period, rather than the early period, because more firms have adopted CSR. An industry competitor's behavior seems to become a stronger pressure on a focal firm's CSR adoption decision over time. The group of early adopters does not seem to make its CSR decision as a response to its rivals, whereas follower firms in later periods are likely to be more

sensitive to its industry competitors' CSR adoption in order to avoid potential penalties (e.g., Nikolaeva, 2014).

In addition to competitive pressure, institutional pressures prompted by institutional isomorphism and exerted by foreign stock market listing appear to have a positive relationship with earlier CSR adoption, thereby leading to quicker diffusion of CSR within a country. This finding indicates that social pressure is an important factor in the adoption and diffusion of CSR across firms within the same country context, which is consistent with the institutional theory (DiMaggio & Powell, 1983; Haveman, 1993). In other words, firms are still likely to imitate "doing something good" behavior of other firms in the market, in addition to other types of organizational behaviors or practices (Lieberman & Asaba, 2006). Initially, this institutional mimetic pressure was found to be effective during the early period and became non-effective during the middle and late timing period, while competitive pressure played a significant role at that time. Moreover, by being listed on foreign stock exchange and exposed to international stock market investors, firms have an opportunity to learn from foreign firms in the international market and mimic the "global standard" socially responsible behaviors that MNEs would have (Marano & Kostova, 2016). This exposure seems to motivate a firm's earlier adoption of CSR.

Firm size, measured as the number of employees, was positively associated with firms' adoption of CSR. Although the majority of the sample consisted of large firms with an average of 1,109 employees, firms with even larger numbers of employees were still more likely to adopt CSR. This result is consistent with previous studies that have explained the positive association in terms of stakeholder scrutiny or visibility and accessibility of resources. Additionally, this factor remained significant during the early, middle, and late timing.

Firm age was also found to be a significant predictor of firms' earlier adoption of CSR. However, the opposite (negative) sign of coefficients of firm age was observed, which means that older firms with longer histories are less likely to adopt CSR. This result is somewhat counterintuitive because it appears that intangible assets accumulated by greater operational experiences at the corporate level do not contribute to firms' decisions regarding CSR adoption. Instead, newer firms may be more flexible with respect to exploring and adopting a new management policy and more in tune with contemporary environmental changes and societal expectations.

7.2 Contributions

This study makes a number of important contributions to the existing literature. With respect to the diffusion of CSR adoption, prior to this study, there has been only limited knowledge on how and why firms adopt CSR early and how adoption diffuses across firms when CSR implementation is not obligatory. First, this research extends the competitive reaction literature and oligopolistic reaction literature by analyzing CSR adoption and diffusion as a matching reaction to the CSR behavior of competitors in the same industry sector. So far, most of the previous studies concerning industry competitors' behavior have been more focused on its effect on a firm's financial performance rather than on CSR performance (Lin & Chih, 2016). In the analysis, using the observed industry competitors' previous CSR behavior up to the prior year, this study applied the "competitive action-reaction" and "competitive move-countermove" explanations based on previous oligopolistic reaction literature to elucidate the diffusion of firms' CSR adoption decision.

Second, another theoretical contribution is based on the empirical analysis of pure rivalry-driven competitive pressure. By separating out the potential mimetic isomorphism factor, which may be part of the dual effect of industry leader, from the same industry competitors' pressure, the pure rivalry-driven competitive pressure from non-leader competitors was clearly identified and could be examined for the first time, to my knowledge. Thus, the explanation from the competitive reaction perspective is further supported with the analysis of the role of non-leader rival's CSR as a pure rivalry-driven factor in a firm's earlier adoption of CSR, which can lead to the diffusion of CSR across firms.

Next, this work also contributes to the CSR literature. By incorporating and examining potential determinants of CSR adoption and diffusion from multiple perspectives, both the international and domestic external pressures (e.g., institutional mimetic pressure and competitive pressure) and the internal factors simultaneously, this research extends the understanding on the diffusion of voluntary CSR adoption behavior. In particular, since previous research did not fully consider competitive pressure exerted by one's rivals as a potential factor of CSR adoption decision in addition to the institutional factors and corporate characteristics, this study provides additional empirical support from the competitive perspective in explaining the determinants of CSR diffusion. In terms of the literature studying CSR adoption and diffusion, the competitive perspective has not yet been simultaneously considered as a separate pressure, distinct from the institutional pressure. In addition, this research utilizes longitudinal data in empirical analysis to consider a timing factor to explain the diffusion of CSR adoption. This approach can clarify the factors that provoke different timing of a firm's CSR adoption decision, resulting in the diffusion of CSR across firms within a country. Additional analysis in this study

further documents the change in the role of the determinants of CSR adoption over time and allows us to deepen our understanding on how the role of determinants changes over time.

Lastly, this study provides practical contributions. Armed with my findings, policymakers will be able to find and target non-initiating companies that are more likely to adopt CSR in order to facilitate its diffusion across firms within a country. Appropriately targeted incentives may lead these companies to adopt CSR earlier, thus enhancing the diffusion of CSR among firms that have not yet initiated it. For example, large firms and/or younger firms with more flexibility in the adoption of new management policy are those more likely to adopt CSR early. As more firms get involved in CSR and disclose their CSR-related performances by publishing CSR reports, they would be effective drivers, which can accelerate the CSR adoption of their within-industry rivals as well as outside-industry players. This study will be particularly informative for countries with no mandatory requirement and a low rate of CSR adoption among companies.

7.3 Limitations and future research

In spite of the contributions noted above, this study has several limitations. First, voluntary CSR adoption behavior was measured with a firm's first CSR reporting. I believe that this measurement is a meaningful and appropriate way to at least capture whether or not the company has previously adopted CSR by showing the CSR performance and including CSR-related information. However, CSR information disclosure may not necessarily indicate the firm's sincere implementation of CSR, and it may not reflect the different levels of CSR implementation or commitment among those companies. Future studies may find other

supplementary measurements such as a survey on the persistence of CSR behavior, sincerity of CSR implementation, or effort on improvement of CSR practice.

Second, while this study incorporated multiple external pressures such as competitive and institutional mimetic pressures, other types of potential external pressures exerted by a firm's global partnership or supply chain may be present. With the explicit or implicit CSR expectations or requirements by this stakeholder group of business partners such as buyers and suppliers along the global supply chain, the firms would be more likely to adopt and implement CSR even without domestic government regulations in order to continue their businesses with those partner companies.

Lastly, since this study used a sample of publicly traded companies in Korea, issues regarding generalizability may present. Although the majority of listed firms in a variety of industries were included in the sample, most of the 711 sample companies are large firms. Consequently, the generalizability of the findings to SMEs or privately held firms may be limited. For instance, some of the non-significant firm characteristics in this study may be important factors for SMEs' CSR adoption decision. In terms of the reaction to the external pressures, SMEs or privately held firms may find different ways to accept and respond. The inclusion of privately owned firms or SMEs represents a fruitful direction for future research. The Korean sample context also limits the results. Because the country has a voluntary CSR policy, the Korean context provides a research scope for focusing on the determinants of the diffusion of voluntary CSR adoption. Thus, the findings may not be applicable to countries with mandatory CSR policies or mandatory CSR rules in their stock market, although a larger number of countries have no mandatory CSR requirement. A cross-national empirical study analyzing the

pattern of CSR diffusion would also be useful, should the data become available.

APPENDIX. Results of Discrete-time logistic regression models in Odds Ratios

(standard errors in parentheses)

Variable	Model (1)	Model (3)	Model (5)
1. Competitors (H1)	1.28**	1.31**	
	(0.12)	(0.12)	
1a. Non-leader rivals (H1a)			1.34**
			(0.15)
1b. Leader (H1b)			1.02
			(0.29)
2a. Mimetic All (H2a)	1.02*		1.02*
	(0.01)		(0.01)
2b. Mimetic Prior (H2b)		1.27*	
		(0.14)	
3. Int'l listing (H3)	3.02*	2.96*	2.96*
	(1.32)	(1.29)	(1.30)
4. Firm size (H4)	2.77**	2.78**	2.74**
	(0.26)	(0.26)	(0.26)
5. Profitability (H5)	1.20	1.19	1.20
	(0.55)	(0.58)	(0.54)
6. Firm age (H6)	0.72**	0.72**	0.72**
	(0.08)	(0.08)	0.08)
7. Working years (H7)	1.05	1.05	1.05
	(0.11)	(0.11)	(0.11)
N	7085	7085	7085
$^{\dagger}p < 0.10$,	Discrete	Discrete	Discrete
$*p < 0.05$,	Time	Time	Time
$**p < 0.01$	Logistic	Logistic	Logistic

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